

REMARKS

The Applicants thank the Examiner for the careful examination of this application. The Applicants also thank the Examiner for the indication of allowance of claim 9, 12, and 16 if rewritten in independent form. Claims 8-16 are pending and rejected.

Claim 1 positively recites exposing a surface of a substrate to high energy particles to pre-amorphize a layer of the crystal adjacent the surface. In addition, Claim 1 positively recites implanting the substrate with a temporary impurity atom and heating the substrate to cause the crystal to re-grow within the layer adjacent the surface. Claim 1 also positively recites forming a coating comprising a target dopant over the surface of the substrate and annealing to cause the target dopant to diffuse from the coating into the substrate. These advantageously claimed features are not taught or suggested by the patents granted to Kimura or Bensahel et al., either alone or in combination.

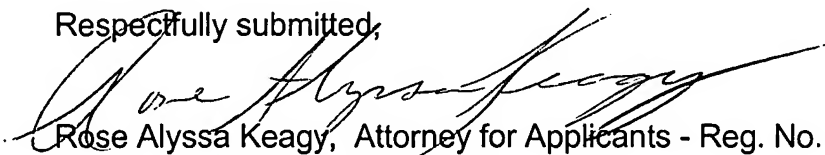
Kimura teaches away from the advantageously claimed invention because Kimura doesn't use a doped layer for the coating or an additional layer for making the junctions shallower (column 3 lines 8-11, column 4 lines 20-23). Bensahel et al. teaches away from the advantageously claimed invention because Bensahel et al. does not teach exposing a surface of the substrate to high energy particles to pre-amorphize a layer of the crystal adjacent the surface (column 3 lines 38-58).

Moreover, there is not motivation or suggestion to combine the teachings of Kimura and Bensahel et al. In fact, such a combination would be illogical because Kimura teaches the suppression of the substrate temperature during implantation (column 4 lines 6-13) which is undesirable in the teachings of Bensahel et al. (column 3 lines 52-53). Combining the teachings of Kimura and Bensahel et al. would also be illogical because Bensahel et al. teaches a method for handling metallic coatings to create light emitting diodes (column 3 lines 47-55), but the method taught by Kimura does not comprehend or accommodate the use of such coatings (column 3 lines 8-16).

Therefore, the Applicants respectfully traverse the Examiner's rejection of Claim 8 and respectfully assert that Claim 8 is patentable over the patents granted to Kimura or Bensahel et al., either alone or in combination. Furthermore, Claims 9-16 are allowable for depending on allowable independent Claim 8 and, in combination, including limitations not taught or described in the reference of record.

For the reasons stated above, this application is believed to be in condition for allowance. Reexamination and reconsideration is requested.

Respectfully submitted,



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